

OKLAHOMA CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION
P.O. BOX 52000
OKLAHOMA CITY, OK 73152-2000
(Rule 165:10-3-1)

API NUMBER: 083 24330

Approval Date: 08/29/2014
Expiration Date: 02/28/2015

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 18 Twp: 17N Rge: 2W County: LOGAN
SPOT LOCATION: SW SE SW SW FEET FROM QUARTER: FROM SOUTH FROM WEST
SECTION LINES: 240 730

Lease Name: GEORGE PLAGG Well No: 1-19MH Well will be 240 feet from nearest unit or lease boundary.
Operator Name: OSAGE EXPLORATION & DEVELOPMENT INC Telephone: 4052700989 OTC/OCC Number: 23098 0

OSAGE EXPLORATION & DEVELOPMENT INC
324 N ROBINSON AVE STE 800
OKLAHOMA CITY, OK 73102-6419

HUBERT S PLAGG
375 WEST COUNTY ROAD 73
GUTHRIE OK 73044-

Formation(s) (Permit Valid for Listed Formations Only):

Name	Depth	Name	Depth
1	MISSISSIPPIAN	5722	6
2			7
3			8
4			9
5			10

Spacing Orders: 611948

Location Exception Orders: 612360
622335

Increased Density Orders:

Pending CD Numbers:

Special Orders:

Total Depth: 10707

Ground Elevation: 1108

Surface Casing: 350

Depth to base of Treatable Water-Bearing FM: 230

Under Federal Jurisdiction: No

Fresh Water Supply Well Drilled: No

Surface Water used to Drill: Yes

PIT 1 INFORMATION

Type of Pit System: CLOSED Closed System Means Steel Pits

Type of Mud System: WATER BASED

Chlorides Max: 4500 Average: 1500

Is depth to top of ground water greater than 10ft below base of pit? Y

Within 1 mile of municipal water well? N

Wellhead Protection Area? N

Pit is located in a Hydrologically Sensitive Area.

Category of Pit: C

Liner not required for Category: C

Pit Location is BED AQUIFER

Pit Location Formation: GARBER

Approved Method for disposal of Drilling Fluids:

D. One time land application -- (REQUIRES PERMIT)

PERMIT NO: 14-28070

H. CLOSED SYSTEM=STEEL PITS PER OPERATOR REQUEST

This permit does not address the right of entry or settlement of surface damages.

The duration of this permit is SIX MONTHS, except as otherwise provided by Rule 165: 10-3-1.

Rule 165: 10-3-4 (c) (7) (e) - The Operator shall give 24 Hours notice by telephone to the appropriate District Office of the Conservation Division as to when Surface Casing will be run.

HORIZONTAL HOLE 1

Sec 19 Twp 17N Rge 2W County LOGAN

Spot Location of End Point: SW SE SW SW

Feet From: SOUTH 1/4 Section Line: 200

Feet From: WEST 1/4 Section Line: 730

Depth of Deviation: 5013

Radius of Turn: 800

Direction: 179

Total Length: 4500

Measured Total Depth: 10707

True Vertical Depth: 5722

End Point Location from Lease,
Unit, or Property Line: 200

Notes:

Category	Description
LOCATION EXCEPTION - 612360	8/28/2014 - G72 - 19-17N-02W (I.O.) X 611948 MSSP, OTHERS COMP INT. NCT 200 FNL NCT 200 FSL NCT 660 FWL; SLAWSON EXPLORATION CO., INC. 5/5/2013
LOCATION EXCEPTION - 622335	8/28/2014 - G72 - MOD 612360 TO CHANGE OPERATOR TO OSAGE EXPLORATION AND DEVELOPMENT, INC., 3/7/2014
SPACING - 611948	8/28/2014 - G72 - (640 HORZ) 19-17N-02W VAC 514727 MSSML, OTHER EXT 604689 MSSP, OTHERS POE TO BHL NCT 660' FB

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Office of the Conservation Division as to when Surface Casing will be run.